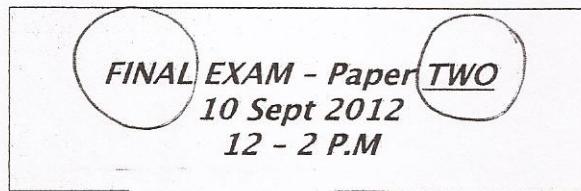


The Arab League  
Council of Arab Health Ministers  
The ARAB BOARD OF MEDICAL SPECIALIZATIONS  
*Scientific council of Anesthesia*



NAME: .....  
NUMBER: .....  
CENTER: .....

**INSTURCTIONS FOR THE EXAM**

1. Mark your number and write your name
2. Be sure to give all papers (questions & answers sheets) to the supervisor before you leave the exam room. Any missing paper may oblige us to cancel your examination.
3. Time allowed: **TWO HOURS.**
4. You are not allowed to leave the examination hall before 30 minutes have passed.
5. If you have an urgent need to talk to the supervisor or to leave the room for any reason, you have to raise your hand (do not ever talk) until he comes and responds to your request.
6. Try to answer all the questions, as there is no penalty for wrong answers.
7. This book contains /15 / numbered pages. Verify the number of pages. Be sure that there are no repeated pages or missing ones.

This paper consists of 75 multiple-choice questions. There is only one correct answer for each question. Select the single most appropriate answer and mark it on the answer sheet.

**GOOD LUCK**

1. Arterial hypoxia in patients with adult respiratory distress syndrome can be explained by all of the following EXCEPT:
  - A. Ventilation perfusion mismatch ✓
  - B. Decreased functional capacity ✓
  - C. Decreased pulmonary compliance ✓
  - D. Pulmonary hypertension
  - E. Pulmonary edema ✓
2. A sevoflurane vaporizer will deliver an accurate concentration of an unknown volatile anesthetic if the latter shares which property with sevoflurane?
  - A. Molecular weight
  - B. Viscosity
  - C. Vapor pressure ✓
  - D. Blood/gas partition coefficient
  - E. Oil/gas partition coefficient
3. If the anesthesia machine is discovered Monday morning having run with 5 L/min of oxygen all weekend long, the most reasonable course of action to take before administering the next anesthetic would be
  - A. Turn machine off for 30 minutes before induction
  - B. Place humidifier in line with the expiratory limb
  - C. Avoid use of sevoflurane
  - D. Change the CO<sub>2</sub> absorbent
  - E. Administer 100% oxygen for the first hour of the next case
4. When a ventilator pressure-relief valve stuck in the closed position that can result in
  - A. Barotrauma
  - B. Hypoventilation
  - C. Hypoxia
  - D. Hyperventilation
  - E. Low breathing circuit pressure
5. A patient presents for surgery and he has a VDD pacemaker. Select the true statement regarding this pacemaker.
  - A. It senses only the ventricle ✗
  - B. It paces only the ventricle ✓
  - C. Its response to a sensed event is always inhibition
  - D. Its response to a sensed event is always a triggered pulse
  - E. It is not useful in a patient with AV nodal block

6. The correct location for placement of the V5 lead is

- A. Midclavicular line third intercostal space
- B. Anterior axillary line fourth intercostal space
- C. Midclavicular line fifth intercostal space
- D. Anterior axillary line fifth intercostal space.
- E. None of the above

7. If the internal diameter of an intravenous catheter were doubled, flow through the catheter would be

- A. Decreased by a factor of 2
- B. Decreased by a factor of 4
- C. Increased by a factor of 8
- D. Increased by a factor of 16
- E. Increased by a factor of 32

8. The device on anesthesia machines that most reliably detects delivery of hypoxic gas mixtures is the

- A. Fail-safe valve ✓
- B. O2 analyzer
- C. Second-stage O2 pressure regulator
- D. Proportion-limiting control system
- E. Diameter-index safety system ✗

9. Which of the following systems prevents attachment of gas-administering equipment to the wrong type of gas line?

- A. Pin-index safety system ✓
- B. Diameter-index safety system
- C. Fail-safe system
- D. Proportion-limiting control system
- E. None of the above

10. During normal laminar airflow, resistance is dependent upon which characteristic?

- A. Density
- B. Viscosity ✓
- C. Molecular weight
- D. Vapor pressure
- E. Temperature

11. Which is TRUE about a pregnant patient with severe Pregnancy-induced hypertension (PIH) undergoing a general anesthetic for cesarean section?

- A. Ketamine is the induction agent of choice ✗
- B. Magnesium does not have to be continued in the postoperative period ✗
- C. The increase in airway edema is exaggerated compared with the normal pregnant patient ✓
- D. An increased dose of succinylcholine is required if the patient is on magnesium ✗
- E. 0.5 MAC halothane causes neonatal depression ✗

12. 29 years old at term presents in early labour. She is known to have critical Mitral Stenosis. The sound medical management decision may involve all EXCEPT:

- A. Insertion of PA catheter ✓
- B.  $\beta$  – blocker for maternal tachycardia ✓
- C. Supplemental Oxygen ✓
- D. Epidural anesthesia ✓
- E. Trial of labour ✗

13. Regarding Brachial plexus block, the following approach is associated with high incidence of pneumothorax:

- A. Interscalene
- B. Axillary
- C. Supraclavicular
- D. More with axillary than with Supraclavicular
- E. More with Interscalene than Axillary

14. Systemic absorption of local anesthetic occurs most rapidly following which of the following techniques?

- A. Femoral block
- B. Caudal block
- C. Lumbar epidural block
- D. Axillary block
- E. Intercostal block ✓

15. The most appropriate level for a transurethral resection of the prostate under spinal anaesthesia is:

- A. T 8
- B. T10
- C. L2
- D. L4
- E. S1

16. A retrobulbar block will block all of the following nerves EXCEPT:

- A. Nasociliary nerve
- B. Lacrimal nerve
- C. Optic nerve
- D. Abducent nerve
- E. Ciliary nerves

17. When performing an interscalene block, which of the following anatomic sites is most likely to receive inadequate anesthesia?

- A. Ulnar side of the forearm
- B. Little finger
- C. Radial side of the forearm
- D. Index finger
- E. Thumb

18. A 71 year old man is admitted with a complaint of hoarseness and sore throat. On indirect laryngoscopy, a supraglottic mass is noted with edema of the cords. He is scheduled for direct laryngoscopy under general anesthesia. The approach to this procedure should be:

- A. Kept simple, since it is short procedure
- B. Induction, paralysis, and laryngoscopy
- C. Induction, paralysis, intubation, and laryngoscopy
- D. Paralysis, intubation, induction, and laryngoscopy
- E. To establish an airway before paralysis or instrumentation

19. Contraindication to discharge to home of a patient who had a hernia repair under general anesthesia in a day case setting includes all of the following EXCEPT:

- A. Nausea
- B. Inability to drink without vomiting
- C. Heart rate 50% higher than preoperative value
- D. Inability to walk due to groin pain
- E. Disorientation to person and place

20. Patients who undergo outpatient surgery with isoflurane should not drive or operate machinery for at least:

- A. 30 minutes
- B. 1 hour
- C. 4 hours
- D. 8 hours
- E. 16 hours

21. A TRUE statement regarding drug action in parturients is:  
A. Nondepolarizing muscle relaxants cross the placenta ✗  
B. Depolarizing muscle relaxants do not cross the placenta ✓  
C. Inhalational anesthetics increase uterine muscle tone ✗  
D. N<sub>2</sub>O is contraindicated for caesarean section secondary to interference with vitamin B<sub>12</sub> synthesis ✗  
E. Thiopental does not cross the placenta ✗

22. Postdural puncture headache is:  
A. More frequent with large bore needles ✗  
B. Not lessened by the use of Whitacre needle as compared to Quincke needle  
C. Aggravated by the supine position ✗  
D. Noted immediately ✗  
E. Relieved in 12 hours after epidural blood patch ✗

23. During the performance of a stellate ganglion block, the patient became apneic. This is likely due to:  
A. Vertebral artery injection of local anesthetic  
B. Injection of local anesthetic into the periosteum  
C. Phrenic nerve paralysis  
D. Subarachnoid injection of local anesthetic ✓  
E. Pneumothorax ✗

24. Regional anesthesia techniques that can be used for forceps deliveries include all of the following EXCEPT:  
A. Bilateral pudendal block  
B. Paracervical block ✓  
C. Subarachnoid block  
D. Caudal block ✓  
E. Epidural block

25. Indications for lumbar sympathetic blockade include all of the following EXCEPT :  
A. Acute herpes zoster  
B. Phantom limb pain  
C. Reflex sympathetic dystrophy  
D. Lumbar facet syndrome  
E. Vascular insufficiency

26. The use of succinylcholine to facilitate endotracheal intubation in patients with increased ICP is associated with

A. Increased ICP ✓  
 B. No change in ICP ✗  
 C. Incomplete relaxation ✗  
 D. Conditions more satisfactory than those with the use of pancuronium ✗  
 E. Hyperkalemia ✗

27. Which of the following is an example of ASA Class IV patient?

A. Compound fractured femur  
 B. Insulin-dependent diabetic with autonomic neuropathy  
 C. Unstable angina  
 D. Pheochromocytoma  
 E. GCS 3 and disseminated intravascular coagulopathy

28. A patient with hypertrophic obstructive cardiomyopathy undergoes an appendectomy. Which of the following drugs will worsen the obstruction?

A. Ketamine  
 B. Verapamil  
 C. Phenylephrine ✓  
 D. Beta blockers  
 E. Halothane

29. ONE of the following is TRUE about laser surgery?

A. CO<sub>2</sub> laser causes deep penetration  
 B. ND-YAG laser penetrates tissue to 0.2 mm  
 C. Nitrous oxide supports combustion  
 D. PVC tubes are safe in laser surgery  
 E. Rubber tubes are safe for CO<sub>2</sub> laser

30. All of the following are predictors for the need of post operative ventilation in myasthenia gravis patients, EXCEPT:

A. Duration of the disease > 6 years  
 B. Concomitant respiratory disease ✓  
 C. Daily dose of pyridostigmine more than 750 mg ✓  
 D. Newly diagnosed disease ✗  
 E. Vital Capacity < 40 ml/kg ✓

31. Major causes of hypocalcemia include all the following EXCEPT:

A. Fat embolism  
 B. Hypophosphatemia ✗  
 C. Rhabdomyolysis ✓  
 D. Pancreatitis ✓  
 E. Malabsorption ✓

32. Regarding neuroaxial opioids, ONE of the following is TRUE:

- Spinal opioid augments sympathetic blockade by local anaesthetic drug
- Naloxone does not reverse nausea and vomiting caused by intrathecal opioids
- Epidural opioids are as effective as 0.0625% bupivacaine in relieving pain
- Intrathecal morphine produces up to 24 hours of analgesia
- Intrathecal fentanyl produces up to 16 hours of analgesia

33. All the following are conditions where difficult intubation is anticipated in orthopaedic patients EXCEPT:

- Ankylosing spondylitis
- Rheumatoid arthritis
- Previous correction of scoliosis
- Previous cervical spine fusion
- Dwarfism

34. Phaeochromocytoma is associated with all of the following EXCEPT:

- It arises from adrenal medulla
- Paroxysmal hypertension
- Avoid histamine-releasing anaesthetic drugs
- Hypoglycaemia
- Postoperative hypotension may require noradrenaline infusion

35. All of the following are contraindications to laparoscopic surgery EXCEPT:

- Increased intracranial pressure
- Hypovolaemia
- Mitral regurgitation
- Patient with peritoneo-ventricular shunt
- Patient with congestive heart failure

36. All of the following are true concerning myxoedema EXCEPT:

- Consisting Bradycardia may be observed
- Non-pitting Edema observed
- Treatment should be accompanied by full digitalization
- Fluid and blood replacement must be guided by intense haemodynamic monitoring
- Valvular diseases are frequently observed

37. **HELLP syndrome in pregnancy may be presented with all of the following EXCEPT:**

- @A. Low blood pressure
- B. Jaundice
- C. Haemolytic anaemia
- D. Hypoglycemia
- E. Oliguria

38. **Pregnant patients display all of the following changes EXCEPT:**

- A. MAC of all inhalational anaesthetics progressively decrease during pregnancy
- B. MAC returns to normal by 3rd day after delivery ✓
- @C. Up to 50% of woman at term develop the supine hypotensive syndrome
- D. Dose requirement of pregnant women of local anaesthetics may be reduced up to 30%
- E. Reduction in gastric motility

39. **ONE of the following drugs is least likely to cross the placenta:**

- A. Lidocaine ✓
- B. Pethidine ✓
- C. Midazolam
- D. Thiopentone
- @E. Vecuronium

40. **ONE of the following is most likely to decrease uterine tone:**

- @A. Administration of isoflurane 1% ✓
- B. Administration of N<sub>2</sub>O 50% ✗
- C. Intrathecal injection of 3 ml of 0.5% bupivacaine ✗
- D. Intravenous administration of ketamine 2 mg/Kg BW ✗
- E. Paracervical block with 20 ml of 1% lignocaine

41. **Concerning the supine hypotension syndrome in pregnancy, all of the following are true EXCEPT:**

- @A. It occurs in 11% of all pregnant patients if over 20 weeks gestation on lying supine ✗
- B. It occurs more commonly in multiple pregnancies ✓
- C. Is exacerbated by the administration of epidural anaesthesia
- D. Is avoided by the adoption of a 5 degrees lateral tilt ✓
- E. Is best avoided by uterine displacement to the left rather than to the right ✓

42. The administration of Meperidine (Pethidine) to a parturient may lead to all of the following EXCEPT:

- A. Decreased Apgar score ✓
- B. Decreased Neonatal minute ventilation ✓
- C. Neonatal respiratory acidosis ✓
- D. Decreased uterine blood flow X
- E. Highest exposure in the fetus 2 to 3 hours after administration ✓

43. Concerning fat embolism syndrome all of the following are true EXCEPT:

- A. Classically present within 72 hours following long bone or pelvic fracture ✓
- B. Diagnosis is suggested by petechi on the chest, upper extremity, axilla and conjunctiva ✓
- C. Serum lipase elevation presents the severity of the disease ✓
- D. Pulmonary manifestation progresses from mild hypoxia to severe hypoxia and hypercarbia ✓
- E. Free fatty acids are usually increased X

44. A 45 Kg, 80 years old woman undergoes pin fixation of the right hip in the lateral decubitus position under spinal anaesthesia. One day after the operation she cannot move her left ankle or foot actively. The most likely cause is:

- A. Compression of the sciatic nerve ✓
- B. Compression of the common peroneal nerve X
- C. Injury of the nerve roots at L4-L5 X
- D. Stretching of the femoral nerve ✓
- E. Stretching of the tibial nerve ✓

45. Concerning Electro Convulsive Therapy (ECT) all of the following are true EXCEPT:

- A. It is ideally performed under general anaesthesia with muscle relaxation ✓
- B. Presence of anaesthetist is optimal for airway management ✓
- C. A recent myocardial infarction is a contraindication ✓
- D. An increased Intra Cerebral Pressure (ICP) is not a contraindication X
- E. Premedication with atropine is desirable ✓

46. All of the following are true concerning autonomic hyper-reflexia, EXCEPT:

- A. Can be elicited by a distention of hollow viscus below the level of spinal cord transaction ✓
- B. If the spinal cord transaction is above T6 dermatome, the autonomic hyper-reflexia will be elicited frequently under light general anesthesia
- C. Propranolol is effective in treating hypertension associated with autonomic hyper-reflexia ✓
- D. It is a neurologic disorder associated with hypertension and bradycardia
- E. Spinal anesthesia is effective in preventing autonomic hyperreflexia ✗

47. Concerning patients for laryngectomy, all of the following are true EXCEPT:

- A. May present a difficult intubation ✓
- B. Often require preoperative lung function tests and ABG ✓
- C. May require an initial tracheostomy under local anaesthesia ✓
- D. Inhalation induction is contraindicated ✓
- E. May require simultaneous esophagectomy

48. Early intubation following a burn is indicated in all of the following situations EXCEPT:

- A. There are full thickness burn of lips and nose
- B. There are extensive burns to the chest
- C. Severe cyanide poisoning is diagnosed ✓
- D. 40% of the haemoglobin is converted to carboxyhaemoglobin ✓
- E. A steam burn has occurred with inhalation of steam

49. All of the following are systemic effects of medications on the eye EXCEPT:

- A. Acetazolamide – hypokalaemic metabolic alkalosis ✗
- B. Adrenaline – hypertension, headache
- C. Phenylephrine – hypertension, dysrhythmias
- D. Scopolamine – central anticholinergic syndrome
- E. Timolol – bradycardia, asthma, congestive heart failure

50. Peribulbar block compared to retrobulbar block has the following advantages EXCEPT:

- A. Less incidence of optic nerve damage
- B. Use of smaller volume of local anaesthetic
- C. Separate facial nerve block is not needed
- D. No spread to the contralateral orbit
- E. No spread to the brain-stem

51. In renal transplantation all the following should be considered EXCEPT:

- A. Preoperative optimization of the patient medical condition with dialysis is mandatory ✓
- B. The recipient's serum potassium concentration should be below 5.5 mmol/L
- C. Existing coagulopathy should be corrected ✓
- D. CVP monitoring is very useful in ensuring adequate hydration in the recipient
- E. Neuroaxial anaesthesia is contraindicated in the recipient ✗

52. Predisposing factors for postoperative nausea and vomiting (PONV) in ambulatory surgery include all of the following EXCEPT:

- A. Previous history of vomiting after anaesthesia
- B. History of severe motion sickness ✓
- C. Large doses of narcotics used during anaesthesia ✓
- D. Orthopaedic procedures
- E. Gastric distension ✓

53. All the following are desirable properties of ideal sedative technique in dental surgery EXCEPT:

- A. Rapid onset and recovery ✓
- B. Predictable duration
- C. It should produce effective anxiolysis
- D. No effect on the gag reflex and vomiting —
- E. Has some analgesic effects ✓

54. All of the following nerves are included in the ankle block EXCEPT:

- A. Posterior tibial
- B. Sural ✓
- C. Deep and superficial peroneal
- D. Anterior tibial
- E. Saphenous

55. Concerning regional anaesthesia for obese patients all of the following are true EXCEPT:

- A. Should be considered whenever possible ✓
- B. Will require 80% of the normal mg/Kg drug dose
- C. Should be avoided if difficult airway is anticipated
- D. Is associated with blocks of unpredictable height and onset
- E. May be used even if a history of sleep apnoea is obtained

56. Regarding caudal anesthesia, all of the following are true EXCEPT:

- @A. The recommended dose is 2 ml/kg of local anesthetic ✕
- B. The sacral hiatus forms an equilateral triangle with the two posterior iliac spine points
- C. The sacral hiatus is covered by the sacrococcygeal membrane
- D. The contents of the sacral cavity include all of the following; fat tissue, epidural venous plexus and filum terminale
- E. In adults the dural sac ends at S2

57. Concerning near drowning all the following are true EXCEPT:

- A. Pulmonary oedema may be caused by the fluid shift of water inhalation
- B. In cold water the victim may have dry lung
- C. There may be hypovolaemia ✓
- D. Cerebral hypoxia is delayed in cold water ✓
- E. Outcome is worse in fresh water than in salty water ✓

58. Allodynia is defined as:

- A. Spontaneous pain in an area that is anesthetized
- B. Pain initiated by primary lesion in the nervous system
- C. An unpleasant abnormal sensation whether spontaneous or evoked
- D. An increased response to a stimulus that is normally painful
- @E. Pain caused by a stimulus that does not normally provoke pain

59. In a patient who has persistent and prolonged thoracic pain after Herpes Zoster infection, which one of these treatments would be least effective:

- A. Oral amitriptyline
- @B. Oral Clonidine
- C. Topical Capsaicin ointment
- D. Topical Lidocaine Patch
- E. Oral gabapentine

60. An obese old woman complains of severe back pain that radiates down the left leg four days after epidural placement hip arthroplasty. The most likely diagnosis is:

- @A. Epidural abscess
- B. Epidural Hematoma
- C. Anterior spinal artery syndrome
- D. Arachnoiditis
- E. Meralgia paresthetica

61. Preoperative treatment of subarachnoid hemorrhage patients, without concomitant cerebral vasospasm, might include any of the following, EXCEPT:

- A. Induced hypertension (20% above baseline)
- B. Administration of Nimodipine
- C. Sedation
- D. Analgesic therapy
- E. Administration of antiepileptic drugs

62. All the following are methods of spinal cord protection if a high cross clamp is applied in thoraco-abdominal aneurysm surgery EXCEPT:

- A. Hypothermia of the spinal cord
- B. Lowering CSF pressure
- C. Avoidance of glucose-containing solution during surgery
- D. Somatosensory evoked potential monitoring is useful in detecting spinal cord ischaemia
- E. Use of steroid

63. All the following are true concerning thermoregulation in neonates EXCEPT:

- A. A significant proportion of their heat loss can be accounted for by their large surface area to weight ratio
- B. Heat loss through evaporation can be reduced by humidification inspired gases
- C. The principal method of heat production is metabolism of brown fat
- D. They have a thin layer of insulating subcutaneous fat
- E. They compensate for hypothermia by shivering

64. All the following are true, concerning newborn compared to an adult, EXCEPT:

- A. Arterial pH is lesser than adult
- B. O<sub>2</sub> consumption in ml/kg/min is greater than adults
- C. Tidal volume in ml/kg is lesser than adults
- D. Functional residual capacity in ml/kg is lesser
- E. Carbon dioxide productivity in ml/kg/min is greater than adults

65. All the following methods are of benefit in one lung ventilation to improve oxygenation EXCEPT :

- A. Selective dependent lung PEEP of 15 Cm ( )
- B. Intermittent inflation of the non ventilated lung
- C. Selective non ventilated lung CPAP without tidal ventilation
- D. Differential PEEP/CPAP (PEEP to ventilated lung and CPAP to non ventilated lung)
- E. Use of FiO<sub>2</sub> of 1.0 with conventional ventilation

66. **Anaesthetic considerations in a neonate for repair of tracheo-oesophageal fistula include all the following EXCEPT:**

- A. Gastrostomy may be necessary before or during induction of anaesthesia
- B. Awake intubation could be performed
- C. Endotracheal tube should be positioned below the fistula
- D. Oesophagus is repaired primarily after the fistula is ligated
- E. Gastrostomy tube should be removed immediately after repair of the fistula ( )

67. **Chemotherapeutic agents are associated with the following toxicities EXCEPT**

- A. Bleomycin and pulmonary
- B. Adriamycin and kidney and lung
- C. Most of them and thrombocytopenia
- D. Vincristine and neurologic
- E. Cyclophosphamide potentiates the effect of nondepolarizing relaxants

68. **Abdominal compartment syndrome, all the followings are true EXCEPT:**

- A. Fluids should be restricted ✗
- B. Oliguria usually present
- C. Usually diagnosed by clinical suspicion
- D. Diagnosis is confirmed by measuring bladder pressure  $>25\text{cmH}_2\text{O}$
- E. Treatment involves abdominal decompression

69. **Transfusion related acute lung injury (TRALI) ,all are true EXCEPT :**

- A. Treatment is supportive ✓
- B. Is usually noted 24- 48 hours after transfusion ✓
- C. It is a form of noncardiogenic pulmonary edema ✓
- D. Fever usually present ✓
- E. Symptoms include dyspnea and hypoxia ✓

70. **Which of the following conditions is LEAST likely to be a cause of Lactic Acidosis?**

- A. Severe Sepsis. ✓
- B. Cardiogenic Shock.
- C. Carbon Monoxide poisoning.
- D. Midazolam overdose.
- E. Ethanol poisoning ✓

71. The cardiopulmonary resuscitation , which is TRUE:

- A. Dobutamine is effective as adrenaline
- B. End-tidal CO<sub>2</sub> is useful predicting effectiveness
- C. Sodium bicarbonate should be given without delay
- D. Calcium administration improves outcome
- E. Cardiac output is approximately 75% of normal during CPR

72. What is the appropriate tidal volume to use in patients with ARDS?

- A. 4 - 5 ml/kg body weight.
- B. 6 - 8 ml/kg body weight.
- C. 9 - 10 ml/kg body weight.
- D. 10 - 12 ml/kg body weight.
- E. 12 - 14 ml/kg body weight.

73. The elimination half life of carbon monoxide when breathing 100% oxygen at (2 ) ATM atmospheric pressure is approximately:

- A. 150 minutes.
- B. 120 minutes.
- C. 90 minutes.
- D. 60 minutes.
- E. 30 minutes.

74. As a flow directed pulmonary artery catheter is inserted, you would expect to observe all of the following EXCEPT

- A. Right atrial pressure of 8 mmHg
- B. Right ventricular systolic pressure of 25 mmHg
- C. Pulmonary artery systolic pressure of 25 mmHg
- D. Pulmonary artery diastolic pressure lower than right ventricular diastolic pressure
- E. Wedge pressure of 10 mmHg

75. Dantrolene, one is TRUE :

- A. Has a half-life of about 36 hours
- B. Reduces levels of intracellular calcium
- C. Causes marked cardiac depression
- D. Should be administered daily for 3 days after an episode of malignant hyperthermia
- E. Causes nephrotoxicity

The end